

THAT WHICH IS CLAIMED:

1. A method for dynamically creating a tunnel in a communications network to provide subscribers host access to a network service, comprising:

- 5 storing a subscriber profile in a network database, wherein the subscriber profile includes subscriber-specific network service tunneling requirements;
- receiving at a network device a first subscriber data packet associated with a first network service;
- accessing the subscriber profile to determine if the first network service
- 10 has a subscriber-specific tunneling requirement; and
- creating a first tunnel if a determination is made that the subscriber profile requires a first network service tunnel, wherein the first tunnel has a first end point at the network device and a second end point at the first network service.

- 15 2. The method of Claim 1, wherein storing a subscriber profile comprises storing at least one parameter chosen from the group consisting of the network access identifier, a user/subscriber name and a user/subscriber password.

3. The method of Claim 1, further comprising determining if a first tunnel
- 20 between the network device and the first network service pre-exists prior to creating the tunnel between the network device and the first network service.

4. The method of Claim 1, wherein more than one subscriber accessing the communication network through the network device can simultaneously transmit data
- 25 packets to the first network service via the first tunnel.

5. The method of Claim 1, wherein the method further comprises:
- receiving at the network device a second subscriber data packet associated with a second network service;
- 30 accessing the subscriber profile to determine if the second network service has a subscriber-specific tunneling requirement; and

creating a second tunnel if a determination is made that the subscriber profile requires a second network service tunnel, wherein the second tunnel has a first end point at the network device and a second end point at the second network service.

5 6. The method of Claim 5, further comprising determining if a second tunnel between the network device and the second network service pre-exists prior to creating the tunnel between the network device and the second network service.

10 7. The method of Claim 5, wherein the second tunnel is functional simultaneous with the functioning of the first tunnel.

15 8. The method of Claim 5, wherein the more than one subscriber accessing the communication network through the network device can simultaneously transmit data packets to the first network service via the first tunnel and the second network service via the second tunnel.

20 9. A system for dynamically creating a tunnel in a communications network to provide a subscriber host access to a destination network, comprising:
 a storage device that stores a subscriber profile, wherein the subscriber profile includes subscriber-specific network service tunneling requirements;
 means for receiving at a network device a first data packet associated with a first network service;
 means for accessing the subscriber profile to determine if the first network service has a subscriber-specific tunneling requirement; and
25 means for creating a first tunnel if a determination is made that the subscriber profile requires a first network service tunnel, wherein the first tunnel has a first end point at the network device and a second end point at the first network service.

30 10. The system of Claim 9, further comprising a means for determining if a first tunnel between the network device and the first network service pre-exists prior to creating the tunnel between the network device and the first network service.

11. The system of Claim 9, further comprising:
means for receiving at the network device a second data packet associated
with a second network service;

5 means for accessing the subscriber profile to determine if the second
network service has a subscriber-specific tunneling requirement; and

means for creating a second tunnel if a determination is made that the
subscriber profile requires a second network service tunnel, wherein the second tunnel
has a first end point at the network device and a second end point at the second network
10 service.

12. A network device that dynamically creates a tunnel in a communications
network to provide a subscriber host access to a destination network, comprising:

15 a processor that receives from a subscriber a data packet associated with a
network service;

a database accessed by the processor that stores a subscriber profile that
defines the tunnel requirements for the network service; and

20 a tunnel management module implemented by the processor that
communicates with the database to determine if the subscriber requires a tunnel for
access to the network service and, if a determination is made that the tunnel is required,
the tunnel management module creates a tunnel access session between the network
device and the network service.

13. The network device of Claim 12, further comprising a session
25 management module implemented by the processor that communicates with the database
to manage the tunnel access session provided by the network device.

14. The network device of Claim 12, wherein the tunnel management module
determines if a tunnel between the network device and the network service pre-exists
30 prior to creating the tunnel between the network device and the network service.

